

## REMARKS

Reconsideration of the above-identified patent application is respectfully requested. Claims 7, 9, 10, 12, 21-26 have been cancelled and claims 1-3, 6, 8, 14, 17 and 20 have been amended. Further, new claims 27-32 have been presented.

Claims 1-4, 6, 8-10, 12-15, 17-20 and 22-26 were rejected under 35 U.S.C. §102 as being anticipated by U.S. Patent No. 6,539,910 to Gaiser et al. Applicants respectfully traverse the §102 rejection of pending claims 1-4, 6, 8, 13-15 and 17-20.

The law is well settled that the Commissioner, through the Examiner, bears the initial duty of supplying the factual basis supporting a rejection of a patent application, including the rejection under 35 U.S.C. §102. See, In re Warner, 154 U.S.P.Q. 173, 177 (C.C.P.A. 1967). Not only does a rejection founded under 35 U.S.C. §102 “require[s] the disclosure in a single prior art reference of each element of the claim under consideration” (See, W.L. Gore and Assocs. Inc. v. Garlock, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983)) but it further requires that “each and every element of the claimed invention, [must be] arranged as in the claim.” See, Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co., 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984). “The identical invention must be shown in as complete detail as contained in the . . . claim.” Richardson v. Suzuki Motor Co., 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

The law is also well settled that anticipation may still be found under 35 U.S.C. §102 by inherency, if the prior art reference does not expressly disclose a minor aspect of the claimed invention. Thus inherency permits, in very limited circumstances, an

invention to be anticipated under §102 if the prior art is only lacking minor, well known features in the claimed invention. As stated by the Federal Circuit:

[t]o serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be recognized by persons of ordinary skill.

Continental Can Co. USA v. Monsanto Co., 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

While the disclosure requirement of a prior art reference “presupposes the knowledge of one skilled in the art of the claimed invention, that presumed knowledge does not grant a license to read into the prior art reference teachings that are not present.” Motorola Inc. v. Interdigital Tech. Corp., 43 USPQ 2d 1481, 1490 (Fed. Cir. 1997).

Claim 1, as amended, includes a sharp edge located at the intersection of an annular surface of the first end of the piston and a sidewall portion extending parallel to a centerline of the piston. The sharp edge functioning to direct a fuel passing out of the combustion bowl away from the annular surface of the piston. Upon review of Gaiser ‘910 there is found no express disclosure of directing a fuel passing out of the combustion bowl 18. More specifically, there is found no disclosure of directing a fuel passing out of the combustion bowl and away from an annular surface at the end of the piston. The ‘910 reference is focused upon a piston having a closed gallery for lubrication distribution and cooling purposes.

If the Patent Office is relying upon inherency to make the §102 rejection of claim 1 the Applicants respectfully request some justification and corresponding citations to show how the missing descriptive matter is necessarily present in the ‘910 reference and that it would be recognized by persons of ordinary skill. The Office Action is silent

as to the rationale for concluding that the sharp edge and associated limitations are present in the '910 reference. Upon review of the figures of the '910 patent there is disclosed a combustion bowl or crater 18 adjacent an upper surface 16 of the piston. FIGS. 3 and 4 of the '910 reference illustrate two sectional views taken of FIG. 2 and it appears that where the combustion bowl wall meets the upper surface of the piston there is not disclosed a sharp edge for directing a fuel passing out of the combustion bowl away from the upper surface. In FIG. 3, there appears to be a more rounded edge meeting the upper surface 16. In FIG. 4, there does not appear to be disclosed a sharp edge defined at the intersection of the surface 16 and a portion of the sidewall of the combustion bowl 18 that is parallel to a centerline of the piston. Withdrawal of the §102 rejection of claim 1 is respectfully requested for at least the above reasons.

Claim 14, as amended, defines an invention including a piston body having a sharp edge portion extending around an entrance to a combustion bowl for directing a fuel exiting a combustion bowl away from an end surface of the piston body. As discussed above the '910 reference is silent regarding the directing of a fuel exiting the combustion bowl away from the end surface of the piston.

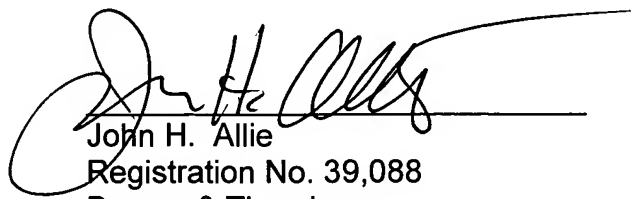
The language of claim 14 requires that the sharp edge extends around the entrance for directing a fuel exiting the combustion bowl away from an end surface of the piston. Upon review of the sectional drawings labeled FIG. 3 and FIG. 4 it appears that at least a portion of the edge extending around the combustion bowl entrance is more rounded than sharp. The sectional views of the drawings are believed not overly clear as to what they are showing. Withdrawal of the §102 rejection of claim 14 is respectfully requested.

Dependent claim 16 was rejected under 35 USC §103 as being unpatentable over Gaiser '910. It is axiomatic that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." See, In re Fritch, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1988). The Applicants respectfully disagree that it would be a matter of design choice to introduce a sharp edge extending around the entrance to the combustion bowl. The '910 reference is silent as to what if any flow direction is expected at the discharge from the combustion bowl. In contrast claim 16 directs the fuel exiting the combustion bowl in a direction approximately equal with the centerline of the piston body.

Dependent claims 2 -4, 6, 8, 13 and 15-20 are believed at least allowable as they depend from independent claims that are believed allowable over the references of record.

Claims 1-4, 6, 8 and 13-32 are believed to be in condition for allowance, and such action is respectfully solicited. The Examiner is cordially invited to contact the undersigned by telephone to discuss any matters that could be resolved in a telephone call in order to further prosecution..

Respectfully submitted,



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